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## MEYER'S STRUGGLE WITH PRESENTISM OR HOW WE CAN UNDERSTAND THE DEBATE BETWEEN PRESENTISM AND ETERNALISM\*

**Abstract.** The paper consists of two parts. The first critically analyses Meyer's [2005] version of the triviality objection to presentism (according to which, presentism is either trivial or untenable), and tries to show that his argument is untenable because—contrary to what he claimed—he did not take into account the entire possible spectrum of interpretations of the presentist's thesis. In the second, positive part of the paper, it is shown that a leading form of tensed theory of time postulates the same ontology as presentism and that it avoids the triviality problem which means that it can be used to generate an alternative formulation of presentism which is no longer vulnerable to the triviality objection.

**Keywords:** presentism; eternalism; tensed theory of time; tenseless theory of time; A-theory of time; B-theory of time; triviality objection; passage of time

### 1. Introduction: Meyer's objection

Repeating the well-known objections to presentism,<sup>1</sup> Meyer [2005] attempts to show that presentism, which claims, roughly, that only the present exists, is either trivial or untenable.<sup>2</sup> He does it, however, using

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<sup>1</sup> See, for example, [Merricks, 1995, p. 523], [Zimmerman, 1998, pp. 208–210], [Sider, 1999, pp. 325–327], [Lombard, 1999, pp. 254–255], [Lombard, 2010], [Crisp, 2004a,b], [Ludlow, 2004] and [Savitt, 2006].

<sup>2</sup> Similar arguments have been repeated in chapter 9 of [Meyer, 2013].

a line of reasoning which unfortunately contains flaws and is indefensible. I shall criticize his reasoning and next show that the debate between presentism and eternalism is not only genuine but also concerns a deep metaphysical problem of our world.

I shall begin with Meyer's minor mistake: he mentioned [Sklar, 1981] as one of the authors who "argue that presentism is incompatible with the theory of relativity, and thus false a posteriori" [Meyer, 2005, p. 213]. However, contrary to what is claimed by Meyer, in "Time, reality, and relativity" and other his papers, Sklar did not maintain that presentism is incompatible with the theory of relativity.<sup>3</sup> Indeed, just the opposite is true as Sklar wrote: "One thing is certain. Acceptance of relativity cannot force one into acceptance or rejection of any of the traditional metaphysical views about the reality of past and future."<sup>4</sup>

This point is interesting because, since the discovery of the theory of relativity, there have been debates about metaphysical consequences of this theory regarding the objectivity of the distinction between the past, the present, and the future with many physicists and philosophers on both sides of the fence: let us recall that Einstein, Weyl, Russell, Quine, Putnam, Smart, Lewis, Mellor, Horwich stand on one side (as denying this possibility), and Heisenberg, von Weizsäcker, Jeans, Broad, Shimony, Prior and Stein on the other (as accepting it). For example, Stein [1968, 1991] maintained that the theory of relativity does not refute presentism but imposes constraints on our notion of the present such that it is reduced to a point, and Sklar took into account the possibility of the reconciliation of presentism with the theory of relativity in his works.<sup>5</sup> So, if Meyer is right that "presentism is either trivial or untenable", one of the stances would be a trivial view and such debates would be pointless. Of course, it is possible that the concerns of, for example,

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<sup>3</sup> Sklar is, generally speaking, an adherent of the MIMO principle "metaphysics in, metaphysics out" [see, e.g., Sklar, 1992, p. 9], speaking that when we interpret a scientific theory, "the metaphysical stance one ought to adopt follows only from the adoption of a number of fundamentally philosophical postulates" [Sklar, 1985, p. 289].

<sup>4</sup> Sklar's [1981], that is the paper "Time, reality, and relativity", first appeared in [Healy, 1981, pp. 129–142] and was reprinted in [Sklar, 1985, pp. 289–304]. The quote above appeared on p. 302 of the reprinted version and other references in this text to Sklar's paper relate to the reprinted version as well.

<sup>5</sup> See [Sklar, 1985, p. 302] and [Sklar, 1992, p. 73]. In his [1974, pp. 272–275], Sklar considered an additional possibility of the reconciliation of presentism with the theory of relativity by relativizing the presentist's notion of reality to an inertial state of motion of the observer in the same manner as this is assumed for the simultaneity.

Broad, Prior, Shimony and Stein were pointless but can this really be the case?

Meyer [2005, p. 213] defines presentism as the thesis:

P: Nothing *exists* that is not present.

Difficulties arise, as it is well known, when we ponder which notion of existence is used in P: the usual *tensed* meaning from natural language, in which the 'exists' in P is the ordinary present tense of the verb 'to exist', or tenseless called by Meyer *temporal existence* and defined by him in the following way: "an object exists temporally just in case it exists at some time or other" [Meyer, 2005, p. 214]. It is easy to see that in the first case P is trivially true:

P1: Nothing *exists now* that is not present.

and in the second obviously false:

P2: Nothing *exists temporally* that is not present.

Meyer also takes into account three other possibilities of understanding the notion of existence: an intermediate (between tensed and tenseless) notion of *existence\**, in which objects exist\* only for certain choices of time *t*, and not for all times, as in the case of temporal existence (p. 216), *existence outside time*, and *existence in other possible world*. Thus we have the following possibilities:

P3: Nothing *exists\** that is not present.

P4: Nothing *exists outside time* that is not present.

P5: Nothing *exists in other possible worlds* that is not present.<sup>6</sup>

P3 is true only for the present time *t* in which case P3 is again trivially true; in other cases it is obviously false. And neither of the theses P4 and P5 are recognizably presentist theses. Meyer concludes that because "there is thus an entire spectrum of interpretations of the presentist's thesis" and "since these readings exhaust all possible alternatives, presentism is therefore either trivial, untenable, or a balanced mix of the two." [Meyer, 2005, p. 216]

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<sup>6</sup> The notions of existence outside time, and existence in other possible worlds are understood by Meyer [2005, pp. 214–215] as possible explications of a notion of *existence simpliciter* which could be an alternative to temporal existence.

## 2. Meyer's objection extended

Before I begin to analyze Meyer's claim, I would like to recall that the triviality objection can be raised against the eternalist thesis as well,<sup>7</sup> and the same refers to Meyer's version of the objection. Let us consider the eternalist thesis in the form:

E: Past, present, and future objects *exist*.<sup>8</sup>

And let us now consider consecutively all senses of 'exist' proposed by Meyer:

E1: Past, present, and future objects *exist now*.

E2: Past, present, and future objects *exist temporally*.

E3: Past, present, and future objects *exist\**.

E4: Past, present, and future objects *exist outside time*.

E5: Past, present, and future objects *exist in other possible worlds*.

It is easy to see that E1 and E3 are obviously false, E2 is trivially true, and neither of the theses E4 and E5 are recognizably eternalist theses. Thus the triviality objection refers to the eternalist thesis as well because all competitors agree on the truth values of E1–E3. This would mean — if his argument is correct — that Meyer's restriction only to the critique of presentism is misleading.<sup>9</sup>

## 3. Meyer's objection refuted

If Meyer is right that presentism is a trivial position then a question arises: is there really nothing to dispute and have we been misled for so long? I do not think so — at least, it is not proven by the (original or extended) argument given by Meyer. For his argument is based on a serious interpretative mistake: he claims — I recall — that he takes into account “an entire spectrum of interpretations of the presentist's thesis” [Meyer, 2005, p. 216] and that “these readings exhaust all possible alternatives” [Meyer, 2005, p. 216], but he did not show that the considered interpretations are really exhaustive. Moreover, it is doubtful whether

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<sup>7</sup> It was noticed by Savitt [2006].

<sup>8</sup> See, for example, [Sider, 1999, p. 326] and [Rea, 2003, pp. 246–247].

<sup>9</sup> Lombard [2010], for example, claims that there is no real controversy between presentism and eternalism.

such a proof can exist since even newer versions of presentism are being proposed. Thus, for example, two dynamic versions of full-blooded presentism were developed by means of the notion *becoming* [Gołosz, 2013, 2017b], and by means of the notion of *dynamic existence* [Gołosz, 2013, 2015, 2018], which were not taken into account by Meyer. Both versions attempt to make an essential problemshift (to use Lakatos' [1970] terminology) in our understanding of presentism: they draw back from treating the thesis that only the present exists as a main ontological thesis of presentism because—in accordance with the long presentist's tradition—the *present is identified there with what exists*. Here are some examples:

Before directly discussing the notion of the present, I want to discuss the notion of the real. These two concepts are closely connected; indeed on my view they are one and the same concept, and the present simply *is* the real considered in relation to two peculiar species of unreality, namely the past and the future. [Prior, 1970, p. 245]

The pastness of the event, that is its having taken place, is not the same thing as the event itself; nor is its futurity; but the presentness of an event *is* just the event. The presentness of my lecturing, for instance, is just my lecturing. [Prior, 1970, p. 247]

To be present is simply to be, to exist, and to be present at a given time is just to exist at that time—no less and no more.

[Christensen, 1993, p. 168]

On a presentist ontology, to exist temporally is to be present. Since presentness is identical with temporal existence (or occurrence) and existence is not a property, neither is presentness a property. Presentness is the act of temporal being. [Craig, 1997, p. 37]

As a result of such an approach to the notion of the present (to use Prior's [1970] words), the statement that only the present exists can be treated as analytically true. It does not trivialize presentism, however, for in the proposed problemshift, the thesis saying that the flow of time exists (in the form of becoming or dynamic existence of the world) becomes the main ontological thesis of presentism, and whether time does flow or not is not a trivial problem.

The first version of dynamic presentism introduces presentism in the following form (expressed in tensed language) [see Gołosz, 2013, p. 54; Gołosz, 2017b, p. 292]

**Becoming:** The events which our world consists of become (come into being to pass).

where becoming, as Broad's absolute becoming, is a primitive notion which cannot be further analysed.<sup>10</sup> This thesis states, following Broad, the reality of the flow of time in the way which avoids the question of the rate of time's passage. What is important, it can be shown that **Becoming** also expresses precisely the *intended* ontology of presentism without trivialising it [see [Gołosz, 2017b](#), p. 292]. To show this, it is enough to recall that the presentist can identify the present with the totality of events that become (come into being to pass) if we assume, following Broad, the ontology of events, and in a similar way the past with the totality of events that became (came into being to pass), and the future with the totality of events that will become (will come into being to pass) but do not yet exist. Now, if we take into account that **Becoming** states that events *become* (*come into being to pass*), we can easily see that it leads precisely to the intended presentist ontology which — and that is crucial here — *is dynamic*: events' becoming (coming into being to pass) means their becoming firstly *present*, and then *past*. That we *identify* (tensed) existence with being present is here accepted and has no effect because **Becoming** is now the main ontological thesis of presentism.

Let me introduce the second version of dynamic presentism which swaps the ontology of events for the ontology of things as fundamental objects. Now, the main ontological thesis is [see [Gołosz, 2013](#), p. 55; [Gołosz, 2015](#), pp. 814–819; [Gołosz, 2018](#), p. 404]:

**Dynamic Reality:** All of the objects that our world consists of exist dynamically.

where **Dynamic Reality (DR)** is expressed in tensed language and the notion of *dynamic existence* is a primitive notion (just as Broad's absolute becoming) which can be roughly characterised by the following postulates:

- (i) the notion of dynamic existence is tensed;

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<sup>10</sup> "To 'become present' is, in fact, just to 'become', in an absolute sense; i.e., to 'come to pass in Biblical phraseology', or, most simply, to 'happen'. Sentences like 'This water became hot' or 'This noise became louder' record facts of *qualitative change*. Sentences like 'This event became present' record facts of *absolute becoming*. [...] I do not suppose that so simple and fundamental a notion as that of absolute becoming can be analyzed, and I am quite certain that it cannot be analyzed in terms of a non-temporal copula and some kind of temporal predicate." [[Broad, 1938](#), 280–281].

- (ii) things dynamically exist in the sense of coming into being to endure;<sup>11</sup>
- (iii) events (which are acts of acquiring, losing or changing properties by dynamically existing things and their collections) dynamically exist in the sense of coming into being to pass.

The term 'objects' applies to things and events; however things are treated here as *primary objects*, while events are secondary. Again, as in the case of **Becoming**, **DR** is accompanied by three definitions:

**The present**  $\equiv$  The totality of objects that dynamically exist.

**The past**  $\equiv$  The totality of objects that dynamically existed.

**The future**  $\equiv$  The totality of objects that will dynamically exist.

Now, it should be emphasized that not only does **DR** states that time flows but it also provides us with the intended ontology for presentism without trivializing it because it says that exactly those objects dynamically exist that we call present. The same concerns the past and the future because **DR** says that all of the objects that our world consists of exist dynamically, which means that it is unnecessary to talk additionally about not-existing (dynamically) objects (that is, the past and the future). That is, we have achieved the intended effect with the single thesis **DR** and three definitions of the present, the past, and the future.

Is **DR** trivial? The answer has to be negative because the notion of the present is not involved in this thesis and neither are the past nor the future involved. And, it is obvious that the definitions cannot be accused of being trivial. **DR** simply states that all of the objects which our world consists of exist dynamically (which is equivalent to the existence of the flow of time), which can be true or false but for sure is not trivial. On the contrary, we have good reason to believe that **DR** is true. This claim needs, of course, more justification than the sentence given above, but it is not a problem here: I wanted only to show that there are versions

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<sup>11</sup> The enduring of things is usually defined as a persistence over time by being wholly present at each time but, as noticed by Merricks [1994, p. 182], "[...] the heart of the endurantist's ontology is expressed by claims like '[object] *O* at *t* is identical with [object] *O* at *t*\*.'" For the author of this paper, this second condition alone suffices for the definition of endurantism and is a better criterion of endurance, so it will be used in what follows. According to the competing view, namely perdurantism, things perdure, meaning persistence through time by having temporal parts, persisting things are here treated as mereological aggregates of temporal parts, none of which are strictly identical with one another.

of presentism which were not taken into account by Meyer, so they are counterexamples to his claim that he took into account “an entire spectrum of interpretations of the presentist’s thesis” [Meyer, 2005, p. 216].<sup>12</sup>

The point which is exploited above appears to be very important because a presentism devoid of dynamics — although logically consistent — seems to be inconsistent with our experience. The transitory character of the concepts of being past, present and future were emphasized by St. Augustine and is underlined today:

[I]f nothing were passing, there would be no past time: and if nothing were coming, there should be no time to come: and if nothing were, there should now be no present time. [...] As for the present, should it always be present and never pass into times past, verily it should not be time but eternity. If then time present, to be time, only comes into existence because it passeth into time past; how can we say that also to be, whose cause of being is, that it shall not be: that we cannot, forsooth, affirm that time is, but only because it is tending not to be.<sup>13</sup>  
[Augustine, 1912, p. 239]

St. Augustine noticed that if nothing passed away, the time called the past was not; and if nothing were coming, the time to come was not either; and if nothing were, then the time called the present could not be either. If we ignore this transitory character of the concepts of being past, present and future, we receive a ‘petrified’ or ‘frozen’ version of presentism which is — to be sure — logically possible but which is incompatible with our experience and as such should be of no interest for presentists. This point, unfortunately, was ignored by Meyer and this means that his analysis of presentism is one-sided and inadequate, just as in the case of ignoring the problem of triviality for eternalism.

I shall also try to demonstrate later that he seriously misinterprets the debate between the tensed and tenseless theories of time, or A-theories and B-theories of time — as they are often called at present,

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<sup>12</sup> Other versions of dynamic presentism are introduced by Dainton [2014, pp. 87–95]; however, I will not analyse the problem of whether they are able to escape the triviality objection.

<sup>13</sup> See also [Loux, 2006, p. 221], where is highlighted that adherents of different versions of A-theory (the tensed theory of time) assume the transitory nature of the A-determinations and represent different possible ways of expressing it. The stipulation that presentism has to admit the existence of the flow of time was called *St. Augustine’s Condition* in [Gołosz, 2017b, p. 288].



and that this debate — when correctly interpreted — can be seen at least in the case of a leading version of the former ones as a discussion between presentism and eternalism as this controversy is seen from the point of view of our language and its relation to the world. What is more, I would like to show below that the debate between presentism and eternalism, seen as the dispute between the tensed and tenseless theories of time (or A-theories and B-theories of time), is not only immune to the objection of triviality but seems to seriously clarify the controversy as well. Undoubtedly, there are other versions of the tensed theories of time (A-theories of time) such as the spotlight theory, the growing block theory, or the shrinking block theory [see, e.g., [Loux, 2006](#), p. 221]; and [Smith, 2005](#), p. 478], however, for the purposes of this paper, it is sufficient, that — using the words of [Loux, 2006](#), pp. 221 and 235] — the most popular version of the tensed theories of time (A-theories), for example, these championed by Prior, Bigelow, Craig, advocate presentism while their opponents (for example, Smart, and Mellor) eternalism. What is most important — as I will show — is not only that the presentist's tensed/A-theoretical ontology matches very well with our phenomenological experience (the present separates what is fixed, known by traces and cannot be changed any more, that is the past, from this which can only be predicted and has no traces but, at least sometimes, can be affected, that is, the future), but that it also corresponds perfectly well with what our tensed language says about the world: saying that the future tensedly exists would mean breaking the rules of language (because the future *will exist* and does not exist) and we do exactly the same when saying that the past tensedly exists (because the past *did exist* and does not exist).

[Meyer \[2005, pp. 216–219\]](#) takes into account a possibility of a defense of presentism against the objection of triviality by referring to the debate between tensed and tenseless theories of time; however, he quickly denies the above-mentioned possibility: “The widely held view that tensed account of time endorse presentism while tenseless theories reject it, is simply mistaken” [\[Meyer, 2005, p. 217\]](#). He tries to show this by spelling out the theses P1 and P2 in two different ways:

	P1	P2
tensed theory	$\forall x(Ex \supset Ex)$	$\forall x(MEx \supset Ex)$
tenseless theory	$\forall x(Ext^* \supset Ext^*)$	$\forall x(\exists t Ext \supset Ext^*)$

where the monadic existence predicate ‘E’ is used to account for time-relative existence claims in the case of tensed theories of time, and (the

same term) ‘E’ is a temporal “location” relation that objects bear to times in the case of tenseless theories of time; the primitive sentential tense operator ‘M’ means ‘at some time’, and ‘t\*’ is the present time (time of utterance) while ‘t’ is a variable ranging over times.

We therefore obtain again the trivial view P1 and the obviously false P2. And this means, according to Meyer, that “tensed theories neither support nor require a non-trivial form of presentism, and even the proponent of the tenseless theory of time has to accept the trivial presentist thesis P1.” [Meyer, 2005, p. 218]

Unfortunately, Meyer seriously misinterprets tensed and tenseless theories of time (A-theories and B-theories of time): although adherents of the former really accept sentences like P1, its triviality is not something they have to argue about with adherents of the latter. The adherents of the tensed theories of time (A-theories of time) need not call into question the ‘triviality’ of P1 simply because they can treat such sentences as analytically true consequences of their understanding (or definition) of the notion of present: for them, *to be present* just means *to exist*. As follows from the citations from Prior and his followers given above, the adherents of the tensed theories of time (A-theories of time) can simply *identify presentness with existence* and this is why they need not call into question the fact that P1 is trivially true.

But, if the adherents of the tensed theories of time (A-theories of time) do not argue with the adherents of the tenseless theories of time (B-theories of time) about the triviality of P1, so, what do the adherents of the tensed theories of time discuss with their opponents? Well, their arguments are – and this is typical for the analytical tradition – arguments about language and about the relation between language and reality; strictly speaking, this is a debate as to whether the tensed structure of our language reflects the real structure of the world or not, and as such this is a debate on a metalinguistic level. As Loux puts it, “A-theorists will all agree that tensed language must be taken at face value: tensed language, they say, points to irreducibly tensed properties and irreducibly tensed states of affairs” [Loux, 2006, p. 218].<sup>14</sup>

It can be seen, for example, in Prior’s “Some free thinking about time”, where Prior defends the reality of the passage of time, the objectivity of the distinction between the past, the present, and the future, and the indefinability of A-determinations of ‘past’, ‘present’, and ‘fu-

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<sup>14</sup> See also [Gołosz, 2011, ch. 4], where these problems are analysed.

ture' in terms of B-determinations of 'earlier' or 'later'. Prior claims, on the contrary, that 'X is earlier than Y' means 'At some time X was past and Y was present', and 'X is later than Y' means the opposite of this:

People who are doing relativity physics are concerned with the relations of before and after and simultaneity, but these aren't the first things as far as the real passage of time is concerned — the first thing is the sequence of past, present, and future, and this is not just a private or local matter, different for each one of us; on the contrary pastness, presentness, and futurity are properties of events that are independent of the observer; and under favourable conditions they are *perceived* properties. [...] I have a good friend and colleague, Professor Smart of Adelaide, with whom I often have arguments about this. He's an advocate of the tapestry view of time, and says that when we say 'X is now past' we just mean 'The latest part of X is earlier than this utterance.' But, when at the end of some ordeal I say 'Thank goodness that's over', do I mean 'The latest part of that is earlier than this utterance'? I certainly do not; I'm not thinking about the utterance at all, it's *overness*, the *nowendedness*, the *pastness* of the thing that I'm thinking for and nothing else. Past, and future are in fact not to be defined in terms of earlier or later, but the other way round — 'X is earlier than Y' means 'At some time X was past and Y was present', and 'X is later than Y' means the opposite of this.<sup>15</sup>

[Prior, 1998, p. 106]

If the distinction between the past, the present, and the future is objective, which was emphasized by Prior, it would mean that *the tensed structure of our language reflects the real structure of the world*. As Loux puts it (emphasizing the transitory character of A-determinations):

A-theorists take time to be irreducibly tensed. They think that the various linguistic expressions of tense (tensed verbs, predicates like 'past', 'present', and 'future', and referring expressions like 'now', 'then', 'yesterday', and 'today') point to objective features of time, features that time would have even in a world without thinkers. But while they take them to be objective, A-theorists hold that these features are transitory: times, events, and objects change with respect to the various temporal properties.

[Loux, 2006, p. 217]

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<sup>15</sup> "Tapestry" is characterized by Prior as "timeless tapestry with everything stuck there for good and all" [Prior, 1998, p. 104], and connected with the view which is just the opposite of his own tensed view of time. All references in this text to "Some free thinking about time" relate to the reprinted version [Prior, 1998].

Prior also underlined the transitory character of the distinction between the past, present and future, and the reality of the passage of time. That is why — he explained — we use past-tensed sentences to express our experiences of yesterday, and the future-tensed sentences to talk about our plans.<sup>16</sup> What is of great importance here is that we receive this way in the case of Prior's version of a tensed theory of time (A-theory) the same ontological theses which characterize presentism.

The adherents of the tenseless theories of time (B-theories) will, of course, deny that the tensed structure of our language reflects the real structure of the world and, as a consequence, the objectivity of the distinction between the past, the present, and the future, as well as the objectivity of the passage of time. This can be seen, for example, in the last part of the quote from “The free thinking ...” [Prior, 1998, p. 106], where Prior wrote about his arguments with Smart about the translatability of tensed sentences into the tenseless language, and what we find there is Prior's famous argument ‘Thank goodness that's over’.<sup>17</sup> The adherents of the tenseless theories of time, such as [Goodman, 1951; Russell, 1903; Smart, 1963] claimed that tensed sentences are translatable into tenseless sentences and, as such, do not describe events and things with their real properties, while their adversaries, such as for example [Broad, 1938; Prior, 1959, 1970], denied this [see, e.g., Loux, 2006, pp. 215–218].

After 1980, the debate changed: the thesis about the translatability of tensed sentences turned out to be untenable because sentences with temporal indexicals, such as for example ‘now’, are untranslatable into sentences not containing them.<sup>18</sup> Instead of this, adherents of tensed and tenseless theories of time started to discuss whether the tensed sentences have tenseless states affairs as truth conditions (or truthmakers).<sup>19</sup> This

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<sup>16</sup> Recall Prior's claims: “But, when at the end of some ordeal I say ‘Thank goodness that's over’, do I mean ‘The latest part of that is earlier than this utterance’? I certainly do not; I'm not thinking about the utterance at all, it's *overness*, the *nowendedness*, the *pastness* of the thing that I'm thinking for and nothing else” [Prior, 1998, p. 106].

<sup>17</sup> See, e.g., [Prior, 1959], where the argument is developed in a broader way.

<sup>18</sup> See, e.g., [Smith, 1987, p. 372] and [Loux, 2006, pp. 224–228]. Smith remarked, following Castaneda, that “the basic kinds of indexicals are irreducible to each other, so that tenses and ‘now’ for example cannot be systematically translated by indexical-containing expressions like ‘this time’ or ‘simultaneously with this utterance’.”

<sup>19</sup> See, e.g., [Mellor, 1981], [Smart, 1980], [Loux, 2006, pp. 205 and 226–228] and [Smith, 2005, p. 475].

became a crucial question because if truth conditions (or truthmakers) involving only unchanging relations of temporal simultaneity and priority suffice as explanations of whether the tensed sentences are true, this would mean that events and things in the world do not have changing, monadic properties of futurity, presentness or pastness. In other words, it would mean that there is nothing in the world corresponding to the tensed structure of our language or, at least, that such an assumption is gratuitous. Mellor, for example, described the debate in such a way:

[...] what both parties mean by a belief's truth condition is its so-called 'truthmaker', i.e. what in the world *makes* it true. What we disagree about is whether *A*-facts or *B*-facts — in the substantial sense of 'fact' for which I argue explicitly — makes temporal beliefs true. This is a real issue, for if *B*-facts do this job, *A*-facts do not; and if they do not, they do not exist, since this is what they exist to do.<sup>20</sup>

[Mellor, 1998, p. XI]

In Mellor's [1998] own indexical theory of *A*-propositions, "*e* is present' is made true at *t* by *e*'s being located at *t*, and similarly for other *A*-propositions" [Mellor, 1998, p. XII and ch. 3].

So the metalinguistic debate about truth conditions and truthmakers of tensed sentences, propositions, and temporal beliefs is — as a matter of fact — a debate about whether there are the objective *A*-facts and *A*-properties of being past, present and future in the world. And if we recall the transitory character of the concepts of being past, present and future, it becomes obvious that the debate involves the problem of the reality of the flow of time and that the discussion about truth conditions and truthmakers of tensed sentences and tensed propositions — as with the earlier debate about the translatability of tensed sentences — is a debate between presentism and eternalism, as this problem is seen from the point of view of our language. Mellor, who is a well-known eternalist, states explicitly in the quotation above that if *A*-propositions have *B*-facts as their truthmakers, *A*-facts concerning properties of being past, present and future in the world) do not exist. And if they do not exist, their changes, that is the flow of time, also do not exist: there is only a sequence of *A*-beliefs in us and the flow of time is a myth:

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<sup>20</sup> Here *A*-facts are contingent facts about the *A*-times of events (for example, that an event is present), and *B*-facts include necessary facts ("if there are such facts" [Mellor, 1998, p. 19] — Mellor adds), and contingent facts about how much earlier or later events are than each other — and hence about what their *B*-times are. See [Mellor, 1998, p. 19].

But then we agents must be constantly changing our *A*-beliefs, especially our beliefs about what is happening *now*, in order to try to keep them true. These changes in us, mostly prompted by our senses, are what make us think of time as flowing, even though it does not flow. For without such properties as being past, present and future, time cannot flow, i.e. make events change from being future to being present and then to being past. [Mellor, 1998, p. 4]

Again, similar to the case of older tensed and tenseless theories of time, *A*-theorists and *B*-theorists defend or deny (respectively) the objectivity of the flow of time and the objectivity of the distinction between the present, the past and the future; that is, they assume or deny (respectively) the ontological theses of presentism.

Of course, none of metalanguage claims of the type:

MLP: *A*-propositions (or *A*-sentences) need *A*-facts as their truthmakers (*B*-facts are not sufficient for their truth).

MLE: *A*-propositions (or *A*-sentences) have *B*-facts as their truthmakers.

MLP': The tensed structure of our language corresponds to the real metaphysical structure of our world (tensed language points to irreducibly tensed properties, that is, *A*-properties, and irreducibly tensed states of affairs, that is, *A*-facts).

MLE': The tensed structure of our language does not correspond to the real metaphysical structure of our world (the tensed sentences have *B*-facts as their truthmakers).

is trivially true (they cannot be proved with help of meanings of the words and logical laws) or obviously false because it is not obvious whether *A*-propositions and *A*-sentences have, or do not have, *A*-facts as their truthmakers. This means that the debate between presentism and eternalism is not trivial: on the contrary, it raises profound metaphysical and epistemological questions with regards to what the metaphysical structure of the world is.

#### **4. How can we understand the debate between presentism and eternalism?**

We are approaching the questions mentioned in the last section through the analysis of the language of time as it is carried out in the discussion

between the adherents of the tensed and tenseless theories of time (A- and B-theorists). If we take this route, we simply consider which language — tensed or tenseless — correctly describes the metaphysical structure of the world. A-theorists are convinced that the various linguistic expressions of tense, that is tensed verbs, predicates like ‘past’, ‘present’, and ‘future’, and referring expressions like ‘now’, ‘then’, ‘yesterday’, and ‘today’ point to objective features of time, and — what is more — they hold that these features are transitory: times, events, and objects change with respect to the various temporal properties [Loux, 2006, pp. 217 and 221]. This must involve a commitment to a real passage of time in the world in some form, as was emphasized by Prior.<sup>21</sup> For it seems to be obvious that if the tensed theory of time is correct, and there are changing objective A-properties and A-facts in the world, time really has to flow because this passage of time is responsible for the transitory character of these features.

It follows from the above considerations that both debates between presentism and eternalism and between the tensed and tenseless theories of time (A-theory and B-theory) do not relate to heses P1, P2, E1, E2 only but rather should be related to the much deeper problem of what the metaphysical structure of the world is, which involves the issues of the transitory character of the concepts of being past, present and future and the existence of the flow of time as well. When we approach this problem from the starting point which is our language, we ponder which notion of existence — tensed or tenseless — should be applied to the world, or — more generally — whether the tensed structure of our language corresponds to the metaphysical structure of the world or, yet otherwise, whether tensed language points to irreducibly tensed properties and irreducibly tensed states of affairs or rather B-facts are sufficient for the truth of tensed sentences. We can resolve these problems not only by analyzing the theses MLP, MLE, MLP', MLE', but also by discussing such problems as:

1. Does time really flow?<sup>22</sup>
2. If it does, what the flow of time consist in?

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<sup>21</sup> “I believe that what we see as a progress of events *is* a progress of events, a coming to pass of one thing after another.” [Prior, 1998, p. 104]

<sup>22</sup> See citations from Prior in fn. 21 with a positive answer and Mellor's [1998, p. 4] with a negative one.

3. If it doesn't, what is the source of the illusion of the existence of the flow of time?
4. What is the nature of cross-time relations and how can they be explained by presentists?<sup>23</sup>
5. Are presentism and the tensed theory of time compatible with the theory of relativity?<sup>24</sup>
6. Why do we have traces of past events but do not find traces of future events if all physical interactions (with the exception of weak interactions) are time-reversal symmetric?<sup>25</sup>
7. How is it possible that we can affect (as we believe) future events but we cannot affect the past if all physical interactions (with the exception of weak interactions) are time reversal symmetric?

These problems are connected — as it is well known. For example, if we deny the passage of time and assume the tenseless notion of existence, we end up with eternalism, this being the view that can be easily reconciled with the theory of relativity. In this case, we do not have difficulty with (2, 4, and 5), but — instead — we have problems with (3) and with vindicating MLE and MLE'. If we assume the existence of the passage of time and the tensed notion of existence, in turn, then we must answer questions (2), (4) and (5), each of which is not trouble-free. It can be seen from this that there is no simple and easy solution to the controversy between presentism and eternalism but it can in no way be treated as pointless and non-existent.

## 5. The triviality objection once again: Conclusions

I have tried to show that we can avoid the triviality problem concerning the controversy over the temporal structure of the world, called the controversy between presentism and eternalism, if we assume the proposed versions of dynamic presentism or if we consider it as a debate between

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<sup>23</sup> This issue arises when we assume the principle that if a relation holds between two things, then both of those things must exist. See, for example, presentists [Bigelow, 1996; Markosian, 2004] on one side of the controversy and [Sider, 1999] on the other side.

<sup>24</sup> See, for example, [Gödel, 1949; Prior, 1998], where is claim that the conception of the distinguished present cannot be reconciled with the theory of relativity and [Shimony, 1993] on the contrary.

<sup>25</sup> See, for example, [Earman, 1974; Gołosz, 2017a,c; Sklar, 1974].



the A-theory and B-theory of time (or — using Meyer's outdated terms — between tensed and tenseless theories of time).

Now, however, an interesting question arises related to this second solution of the triviality problem: how is it possible that the metalinguistic approach which is used in the debate between *A*-theorists and *B*-theorists allows us to avoid the triviality problem? Should not the metalinguistic approach lead to the same problems as presentism/eternalism in the one-sentence formulation of these positions: "Only present things exist"/"Past, present, and future things exist" (in the tensed or detensed way)? The explanation of the point at issue seems to be simple and lies in the holistic line of attack to the problem proposed by the *A*-theorists and *B*-theorists. When we ponder whether the tensed structure of our language corresponds to the real metaphysical structure of our world, not only do we analyze the one-sentence statements "Only present things exist"/"Past, present, and future things exist" (expressed in the tensed or detensed way), but we also have to analyze deep and difficult problems such as, for example, MLP, MLE, and 1–7 listed above. They involve such profound metaphysical and epistemological questions as, for example: whether there are for any true sentence some things in the world which make it true and, especially, whether do past-tensed and future-tensed sentences need presently existing truthmakers; what the source is of our experience of time and of the tensed structure of our language; how we should metaphysically interpret physical theories such as theory of relativity; what the nature of causation is and the origin of its asymmetry.

It seems, then, that the ontological controversy between presentism and eternalism can be alternatively converted into one over the language which we use to describe the world and over the relation between language and reality in such a way that it allows us to avoid the triviality problem. It does not mean, of course, that what there is depends on words. It is not so just because what we really do in such an approach is simply to look for the best conceptual scheme for describing the world. Some of the problems to which this approach leads have been discussed in philosophy since the time of Heraclitus and Parmenides. They refer to the deep metaphysical structure of the world and need to be analyzed and resolved, and — I must repeat — are in no way trivial.

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